

ESDIS Standards Office (ESO)

ESO assists ESDIS in formulating standards policy for NASA Earth Science Data Systems (ESDS), coordinates standards activities within ESDIS, and provides technical expertise and assistance with standards related tasks within the NASA Earth Science Data System Working Groups (ESDSWG).

ESIP Inputs to ESO

Work being done in ESIP clusters and working groups can provide the basis for new standards and practices that benefit the entire Earth science community.

How you can help ESO:

- Join the Standards Interest Group
- Volunteer to review ESO documents
- Propose new standards and practices
- Participate in the Standards Forum

ESO Standards Forum

The standards forum is a discussion area about standards and practices relevant to EOSDIS.

The forum is a place to ask questions, submit comments, discuss trade-offs, and track the status of ESO approved standards as well as to make suggestions for new standards to be considered for inclusion into the approved standards list.

<https://wiki.earthdata.nasa.gov/display/esoforum/ESO+Standards+Forum>



ESDIS Standards Process

1. Individuals and organizations contact ESO with suggestions for existing or developing standards and practices.
2. ESO helps submitters create and refine submissions, then conducts an internal review.
3. Community input is gathered and if favorable, the document is approved for use in NASA ESDS.

Requirements, Standards and Practices

Requirements

Airborne and Satellite Mission Data Systems Requirements

- ISO 19115 Geographic Information Metadata Standard
- NASA Earth Science Data Preservation Content Specification

Standards and Practices

Standards and Practices approved for use in NASA Earth Science Data Systems

Data Format

- HDF 5
- HDF EOS 5
- NetCDF Classic
- NetCDF-4/HDF5
- OGC KML
- ASCII File Format Guidelines for Earth Science Data
- HDF 4 (deprecated in favor of HDF 5)
- HDF EOS 2 (deprecated in favor of HDF EOS 5)

Metadata

- Unified Metadata Model (UMM)
- GCMD Directory Interchange Format (DIF)
- ECHO Metadata Standard
- NetCDF Climate and Forecast (CF) Metadata Conventions

Discovery and Access

- The Data Access Protocol - DAP 2.0
- OpenGIS ® Web Map Service Version 1.1.1
- CEOS OpenSearch
- Polling with Delivery Record (PDR) Mechanism

ESO Standards Interest Group

ESO leads the Standards Interest Group (SIG) to maintain broad communications among stakeholders about ESDIS standards activities. ESO hosts webinars, telecons and meetings of the SIG to exchange information, to provide standards coordination, and identify emerging standards that may be useful in NASA Earth science data systems.

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Interoperability

- Dataset Interoperability Recommendations for Earth Science
- Mapping HDF5 to DAP2

ASCII Data Formats

- ASCII File Format Guidelines for Earth Science Data
- ICARTT File Format Standards (V2.0)
- SeaBASS Data File Format
- NASA Aerogeophysics ASCII File Format Convention

Related Technical Information

- Guidelines for a Common File Format for Aura Instruments
- Creating File Format Guidelines: The Aura Experience

Under Development or Review

- Geospatial Vector Formats
- GeoTIFF
- GRACE-FO Format

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